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The details of my work are given in a forthcoming *Lick Observatory Bulletin*. The elements now computed are as follows:—

True Orbit.	Apparent Orbit.
$P = 44.5$ years	Length of major axis $1''.464$
$T = 1905.4$	Length of minor axis $0.802$
$e = 0.767$	Dist. of star from center $0.561$
$a = 0''.701$	Angle of major axis $11^{\circ}0$
$\omega = 352^{\circ}.6$	Angle of perihelion $13^{\circ}.5$
$\Omega = 20^{\circ}.4$	Position angles increasing.
$i = \pm 20^{\circ}.1$	

These results are considered as approximate only. The apparent motion of the companion will be so rapid during the next few years that data will soon be available for a more complete discussion of the theory of the system than seems advisable at present.

R. G. AITKEN.

May 29, 1905.

#### NEW COMPANIONS TO THREE STRUVE DOUBLE STARS.

In the course of my systematic search for new double stars I have recently found additional close companions to the well-known pairs, Σ 419, Σ 1000, and Σ 1823. The mean results of my measures of the new and old companions are as follows:—

##### Σ 419.

1905.13	$347^{\circ}.4$	$0''.44$	$7.4 - 9.8$	$2^n$	B and C. New.
1905.13	$73^{\circ}.6$	$3''.08$	$7.2 - 7.3$	$2$	A and B = Σ 419.

##### Σ 1000.

1904.95	$313^{\circ}.8$	$0''.27$	$8.2 - 8.5$	$2^n$	A and B. New.
1904.94	$66^{\circ}.8$	$22.29$	$8.0 - 9.0$	$1$	AB and C = Σ 1000.

##### Σ 1823.

1905.34	$239^{\circ}.2$	$0''.21$	$9.0 - 9.5$	$2^n$	A and B. New.
1905.34	$149^{\circ}.6$	$3.49$	$8.7 - 9.7$	$2$	AB and C = Σ 1823.

My measures of Σ 419 and Σ 1000 give practically the same results as those obtained by STRUVE seventy-five years earlier. STRUVE's measure of Σ 1823 is:—

$1830.0 \quad 156^{\circ}.1 \quad 3''.35 \quad 8.5 - 9.5.$

May 23, 1905.

R. G. AITKEN.